



Essential Oil University

GC/MS Report

Item	Lot
Marjoram (Sweet) EO <i>Origanum majorana</i>	6E
Date	Analyst
1/21/2025	Dr. Robert S. Pappas

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The analysis of this batch sample, Marjoram (Sweet) EO, meets the expected chemical profile for authentic essential oil of *Origanum majorana*. No contamination or adulteration was detected. The results provided in this GCMS quality analysis reflect the chemical composition of the oil and lot referenced above on the date of analysis.



Sample Information

Company: Revive**Sample Name:** Marjoram (Sweet) EO**Botanical Name:** Origanum majorana**Lot Number:** 6E**Production Method:** Steam distilled**Sample Type:** EO - Single**Country of Origin:** Egypt**Analysis Date:** 1/21/2025**Manufacture Date:** June 2022

GC/MS

Inst. ID: Shimadzu GCMS-QP2010Ultra**Injection Type:** Split**Split Ratio:** 24.4**Column Type:** ZB-5**Injection Volume:** 0.1 µL**Temperature Program:** 2C/min

Physical Data

ANALYSIS

Optical Rotation @20°C

Refractive Index @20°C

Specific Gravity @20°C

METHOD

USP[781]

USP[831]

USP[841]

RESULTS

+7.64

1.47392

0.89804



Ret. Time	Component	Ret. Idx.	Conc. %	
4.138	3-Methylbutanal	728	0%	
4.257	2-Methylbutanal	731	0.01%	
4.704	2-Ethylfuran	742	0%	
6.278	Methyl 2-methylbutyrate	781	0.01%	
6.755	Unidentified	793	0%	
11.997	Hashishene	918	0.01%	
12.270	alpha-Thujene	923	0.46%	
12.687	alpha-Pinene	930	0.51%	
13.227	Thuja-2,4(10)diene	940	0%	
13.607	Camphene	946	0.02%	
14.899	Sabinene	969	4.7%	
15.204	beta-Pinene	975	0.3%	
15.573	3-Octanone	981	0.02%	
15.831	Myrcene	986	1.41%	
16.283	3-Octanol	994	0.01%	
16.766	Pseudolimonene	1002	0.04%	
16.913	alpha-Phellandrene	1004	0.32%	
17.447	1,4-Cineole	1012	0.01%	
17.599	alpha-Terpinene	1015	9.48%	
18.064	para-Cymene	1022	0.95%	
18.373	Limonene	1026	1.33%	IFRA
18.480	beta-Phellandrene	1028	1.35%	
18.557	1,8-Cineole	1029	0.21%	
18.763	cis-beta-Ocimene	1032	0.03%	
19.453	trans-beta-Ocimene	1043	0.03%	
20.277	gamma-Terpinene	1055	9.69%	
21.047	trans-Sabinene hydrate	1067	3.03%	
22.084	Terpinolene	1082	2.22%	
22.391	para-Cymenene	1087	0.01%	
23.063	Linalool	1097	6.5%	IFRA
23.161	cis-Sabinene hydrate	1098	7.64%	
23.388	Nonanal	1102	0.01%	
23.944	Unidentified	1110	0.01%	
24.741	cis-para-Menth-2-en-1-ol	1121	0.96%	
24.895	alpha-Campholenal	1123	0.02%	
25.445	Unidentified	1131	0.01%	
25.523	Terpin-3-en-1-ol	1132	0.01%	
25.868	trans-Pinocarveol	1137	0.06%	
25.972	trans-para-Menth-2-en-1-ol	1139	0.62%	
26.297	Camphor	1144	0.01%	



Ret. Time	Component	Ret. Idx.	Conc. %	
26.464	cis-beta-Terpineol	1146	0.07%	
27.917	delta-Terpineol	1167	0.02%	
28.042	Borneol	1169	0.04%	
28.750	Terpinen-4-ol	1179	34.22%	
29.052	para-Cymen-8-ol	1183	0.03%	
29.661	alpha-Terpineol	1192	5.29%	
29.777	cis-Piperitol	1194	0.3%	
30.157	Unidentified	1199	0.01%	
30.275	(E)-Dihydrocarvone	1201	0.05%	
30.587	trans-Piperitol	1205	0.32%	
31.090	Unidentified	1213	0.01%	
31.276	trans-Carveol	1215	0.01%	
31.560	Unidentified	1219	0.01%	
31.625	Unidentified	1220	0.03%	
31.771	Citronellol	1222	0.02%	IFRA
32.963	Carvone	1240	0.01%	IFRA
33.371	Linalyl acetate	1246	4%	
35.004	cis-Ascaridol glycol	1270	0.04%	
35.730	Bornyl acetate	1280	0.03%	
36.072	Thymol	1285	0.01%	
36.186	trans-Ascaridol glycol	1287	0.02%	
36.509	Terpin-1-en-4-yl acetate	1292	0.16%	
36.618	Carvacrol	1293	0.01%	
38.163	Unidentified	1316	0.04%	
38.925	delta-Elemene	1328	0.06%	
39.863	alpha-Terpinyl acetate	1342	0.01%	
40.634	Neryl acetate	1354	0.02%	
41.915	Geranyl acetate	1373	0.04%	
44.154	Thymohydroquinone dimethyl ether	1408	0.01%	
44.616	beta-Caryophyllene	1415	1.84%	
45.793	Aromadendrene	1434	0.02%	
46.860	alpha-Humulene	1451	0.07%	
47.130	Alloaromadendrene	1455	0.01%	
47.229	Unidentified	1457	0.01%	
49.068	Viridiflorene	1486	0.05%	
49.342	Bicyclogermacrene	1490	0.94%	
49.865	(E,E)-alpha-Farnesene	1499	0.03%	
50.417	gamma-Cadinene	1508	0.01%	
50.715	delta-Cadinene	1513	0.01%	
54.166	Spathulenol	1571	0.03%	



Ret. Time	Component	Ret. Idx.	Conc. %	
54.489	Caryophyllene oxide	1576	0.03%	
55.210	Viridiflorol	1588	0%	
56.828	10-epi-gamma-Eudesmol	1616	0.01%	
57.393	Unidentified	1626	0.03%	
58.660	Unidentified	1649	0.01%	

Total Identified Compounds **99.83 %**

